

CLAIMS

1. A tube finning machine (10) having a base (12), first mounting means (14, 52; 66) for mounting at least one tube (16) upon the base, second mounting means (20) for mounting a number of fins (22) upon the base, at least one of the first and second mounting means being movable relative to the base, characterised by tensioning means (32, 44) for applying a tensile force to at least part of the tube(s) whilst the fins are being applied thereto.
2. A tube finning machine according to Claim 1 in which the first mounting means (14; 66) is located adjacent one end of the tube(s) (16), and the tensioning means (32, 44) is connected to the other end of the tube(s).
3. A tube finning machine according to Claim 1 in which the tensioning means includes a connector (46) secured to the or each tube (16), the connector being connected to a drive means (32), tension being applied to the tube by way of the connector.
4. A tube finning machine according to Claim 3 in which the connector (46) has a tapered leading end to facilitate passage of the connector, and subsequently the tube (16), through the fins (22).
5. A tube finning machine according to Claim 1 in which the second mounting means (20) is substantially fixed relative to the base (12), so that the fins (22) are maintained substantially stationary relative to the base during the finning operation, and in which the tube(s) (16) are driven to move relative to the base and fins.
6. A tube finning machine according to Claim 5 in which the tube(s) (16) can be driven to move relative to the

- 21 -

base and to the tubes solely by the tensioning means (32, 44).

7. A tube finning machine according to Claim 1 in which the tensioning means (32, 44) is connected to the tube (16) by way of a lip (60) formed at the end (24) of the tube.
8. A tube finning machine according to Claim 1 in which the first mounting means includes a mandrel (52) which is located within the tube (16).
9. A tube finning machine according to Claim 8 in which the mandrel (52) engages the lip (60).
10. A tube finning machine according to Claim 1 having further drive means for imparting a compressive force to the tube.
11. A method of finning a tube comprising the steps of {i} providing a tube finning machine (10) having a base (12), first mounting means (14, 52; 66) for mounting at least one tube (16) upon the base, second mounting means (20) for mounting a number of fins (22) upon the base, at least one of the first and second mounting means being movable relative to the base, and tensioning means (32, 44, 46) for applying a tensile force to at least part of the tube(s) whilst the fins are being applied thereto, {ii} mounting at least one tube upon the base by way of the first mounting means, {iii} mounting a number of fins upon the base by way of the second mounting means, {iv} actuating the tensioning means to move the tubes relative to the fins.
12. A method according to Claim 11 in which a solid material is introduced into the gaps between the fins so as to support the fins during the finning process.